Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet

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N-α-Fmoc-lysine (2)

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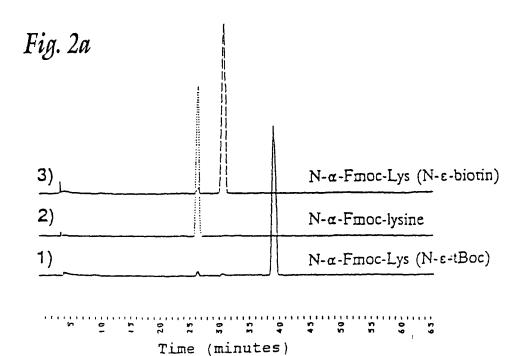
Atty. Dkt.: 2551-124

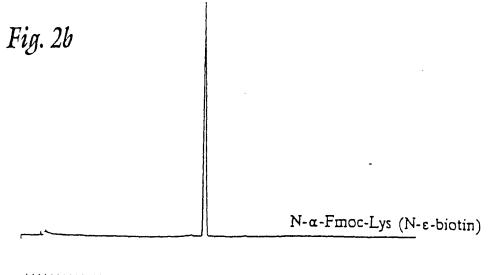
Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet 3 of 57

Atty. Dkt.: 2551-124

$$\begin{array}{c} \stackrel{\text{\tiny CH}}{\overset{\text{\tiny CH}}}{\overset{\text{\tiny CH}}{\overset{\text{\tiny CH}}{\overset{\text{\tiny CH}}{\overset{\text{\tiny CH}}}{\overset{\text{\tiny CH}}{\overset{\text{\tiny CH}}{\overset{\text{\tiny CH}}}{\overset{\text{\tiny CH}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}$$

Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet 4 of 57 Atty. Dkt.: 2551-124 3.50

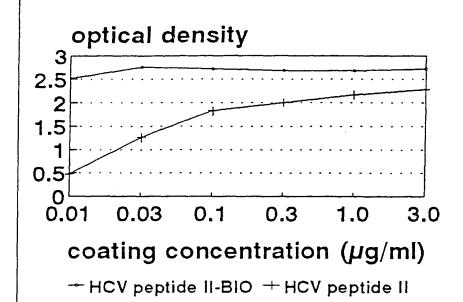




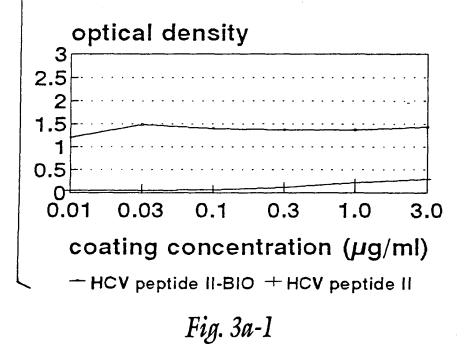
Time (minutes)

Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet 5 of 57 Atty. Dkt.: 2551-124

sample 8320



sample 8242



Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet 6 of 57 Atty. Dkt.: 2551-124

sample 8243

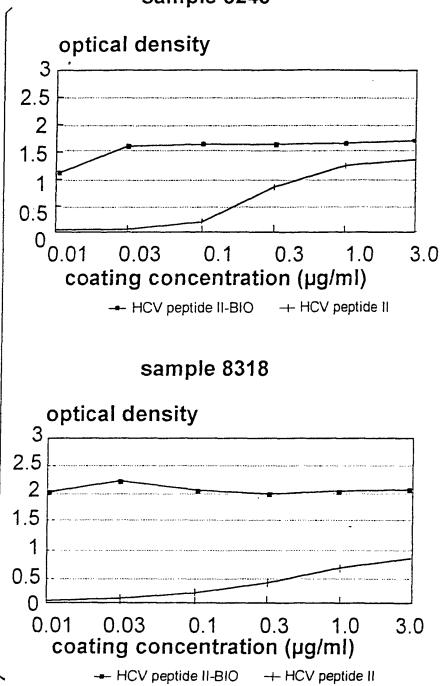
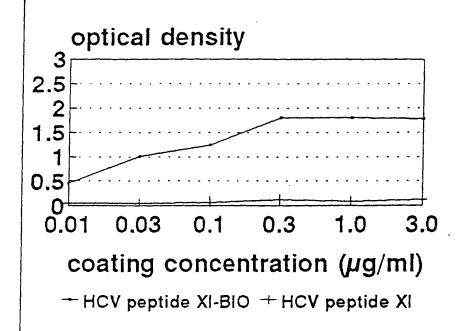


Fig. 3a-2

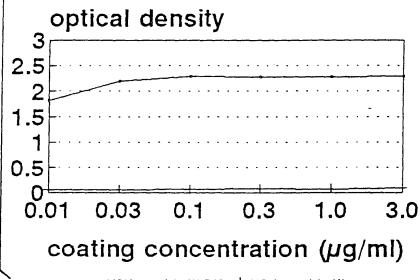
Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet

Atty. Dkt.: 2551-124

sample 8320



sample 8326



+ HCV peptide XI-BIO + HCV peptide XI

Fig. 3b-1

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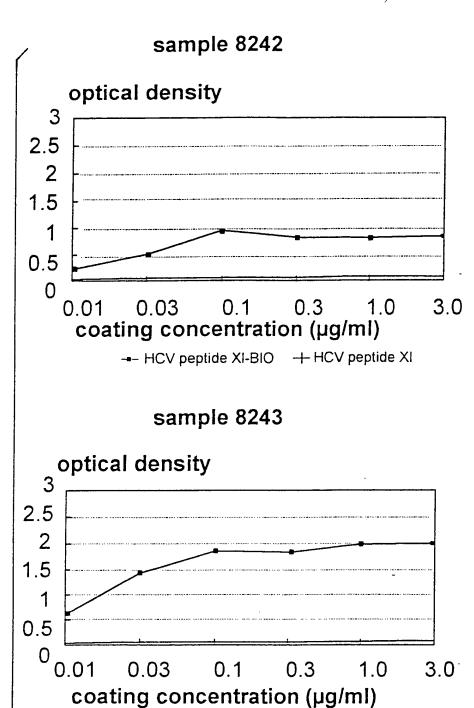
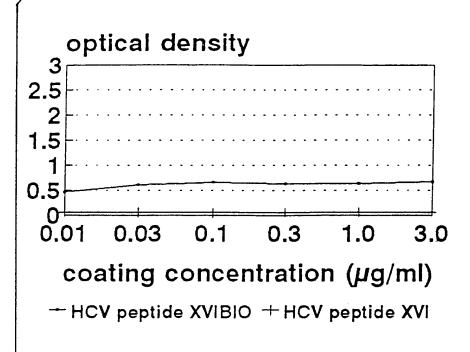


Fig. 3b-2

-- HCV peptide XI-BIO -- HCV peptide XI

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sample 8243



sample 8318

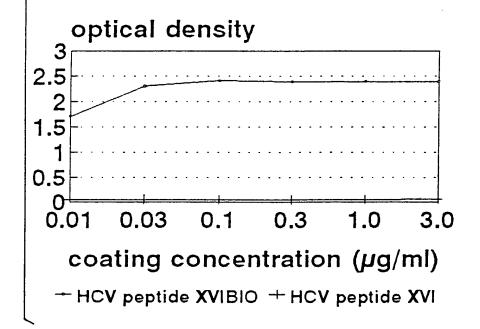


Fig. 3c-1

Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet

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sample 8326

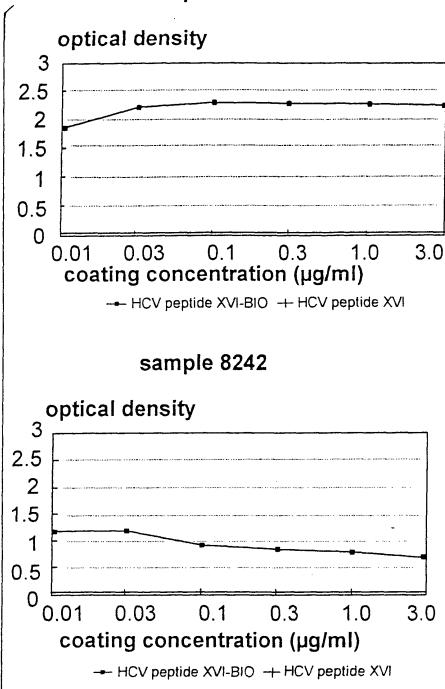
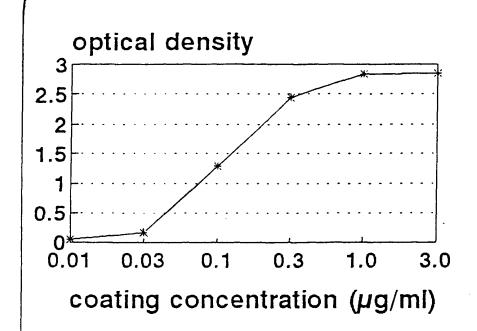
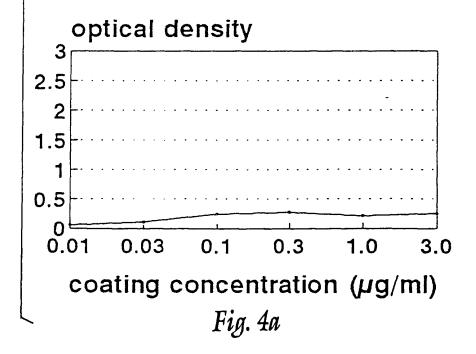


Fig. 3c-2

Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet 11 of 57 Atty. Dkt.: 2551-124 **HCV** peptide II-BIO



HCV peptide XI-BIO



Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet

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HCV peptide XVI-BIO

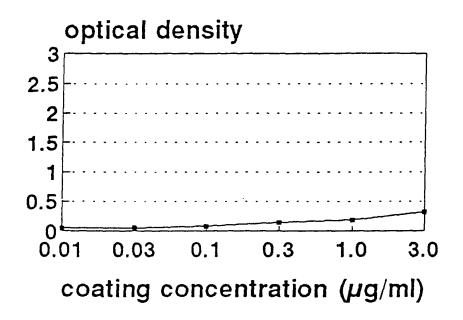


Fig. 4b

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C-terminally biotinylated TM peptide

Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet 14 of 57 Atty. Dkt.: 2551-124 MSTIPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRGRRQPIPKVRRPEGRTWAQPGYPWPLYGNEG MSTIPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRGRRQPIPKVRRPEGRTWAQPGYPWPLYGNEG Sample 8248 **Sample 8243** Fig. 6a-1 2.5, 00 450 nm 2.5₁ 00 450 nm

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MSTIPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRGRRQPIPKVRRPEGRTWAQPGYPWPLYGNEG 0 OLI FITTALLI I DE-CLILLI I DE-CLILLI I DE CLILLI I DE CLILLI I DE CONTRE CONT Sample 8242 Sample 8241 Fig. 6a-2 2.5₁ 00 450 nm 2.5₁ 00 450 nm 0.5 0.5 1.5 رئ

Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet 15 of 57 Atty. Dkt.: 2551-124

Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet 16 of 57 Atty. Dkt.: 2551-124 MSTIPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRGRRQPIPKVRRPEGRTWAQPGYPWPLYGNEG MSTIPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRGRRQPIPKVRRPEGRTWAQPGYPWPLYGNEG Sample 8339 Sample 8332 Fig. 6a-3 2.5, 00 450 nm 2.5₁ 00 450 nm 0.5 0.5 0 5. 3 2 7

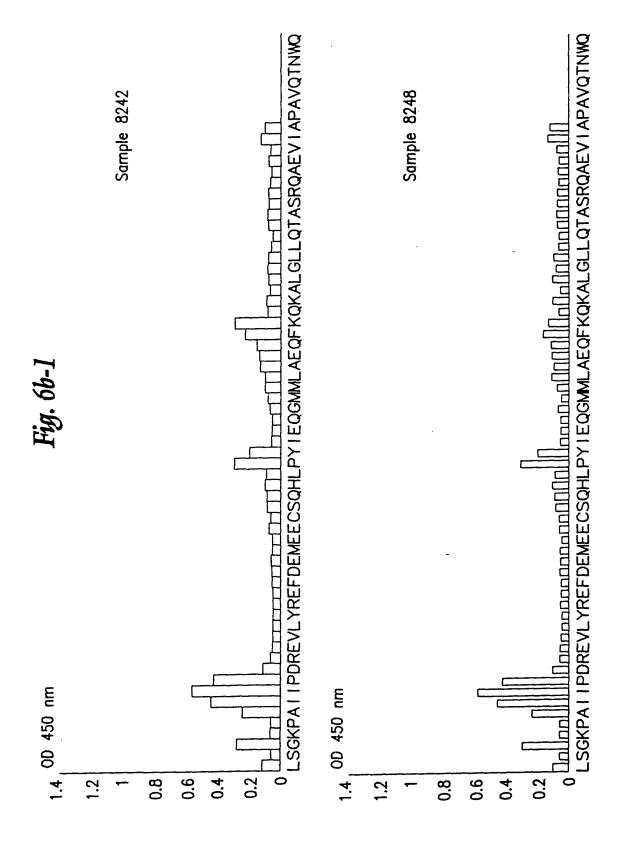
Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet 17 of 57 Attv. Dkt.: 2551-124 MSTIPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRGRRQPIPKVRRPEGRTWAQPGYPWPLYGNEG MSTIPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRGRRQPIPKVRRPEGRTWAQPGYPWPLYGNEG Sample 8383 Sample 8378 Fig. 6a-4 2.5₁ 00 450 nm 2.5₁ 00 450 nm 0 0.5 5. 0.5 2

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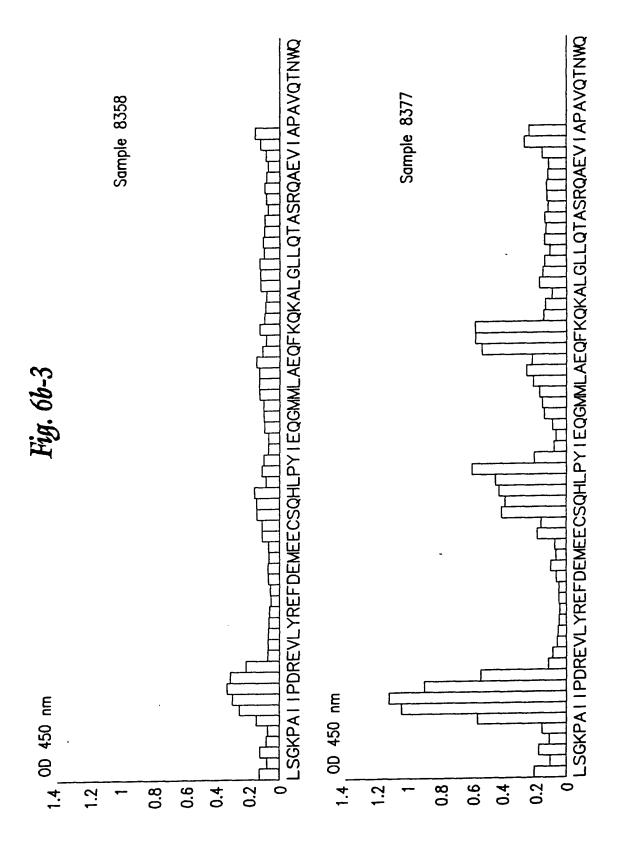
Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet 18 of 57 Atty. Dkt.: 2551-124 MSTIPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRLGVRATRKTSERSQPRGRRQPIPKVRRPEGRTWAQPGYPWPLYGNEG MSTIPKPQRKTKRNTNRRPQDVKFPGGQNGGVYLLPRRGPRLGVRATRKTSERSQPRGRRQPIPKVRRPEGRTWAQPGYPWPLYGNEG Sample 8358 Sample 8377 Fig. 6a-5 2.5₁ 00 450 nm 2.5₁ 00 450 nm 0.5 0.5 .5 5.

Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet 19 of 57 Atty. Dkt.: 2551-124



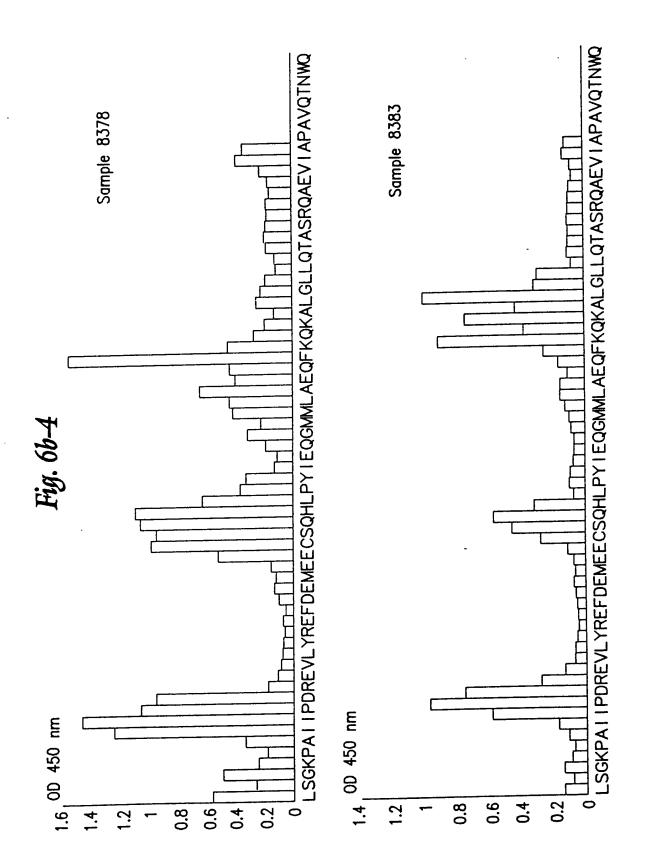
Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet 20 of 57 Atty. Dkt.: 2551-124 LSGKPA! IPDREVLYREFDEMEECSQHLPY!EQGMMLAEQFKQKALGLLQTASRQAEV!APAVQTNWQ LSGKPAIIPDREVLYREFDEMEECSQHLPYIEQGMMLAEQFKQKALGLLQTASRQAEVIAPAVQTNWQ Sample 8339 Sample 8332 Fig. 6b-2 00 450 nm 1.4, 00 450 nm O LTPH 0.5 <u>ر</u>: 0.2 2.5 0 2 0.8 9.0 0.4 1.2

Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet 21 of 57 Attv. Dkt.: 2551-124

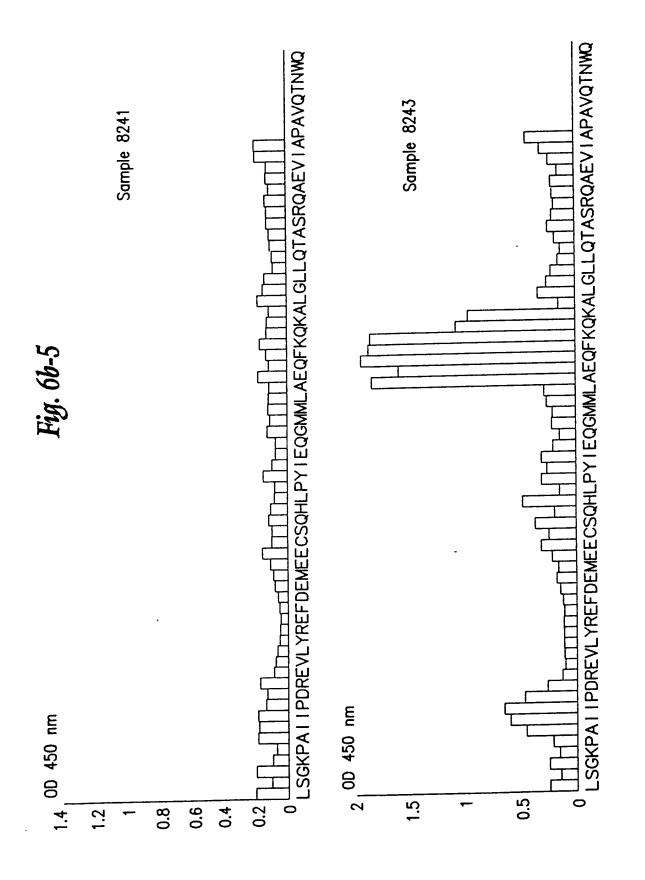


Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet 22 of 57

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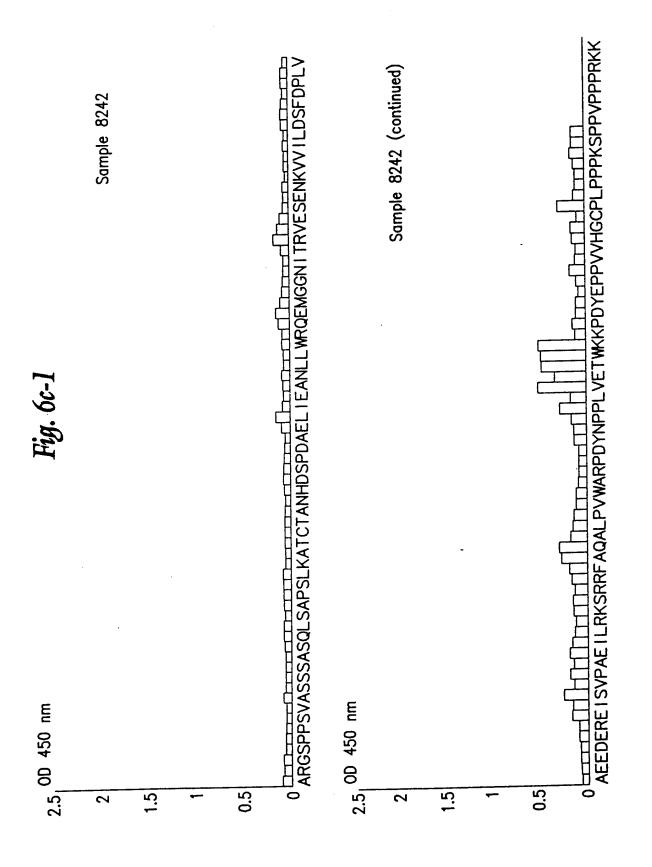


Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet 23 of 57 Atty. Dkt.: 2551-124

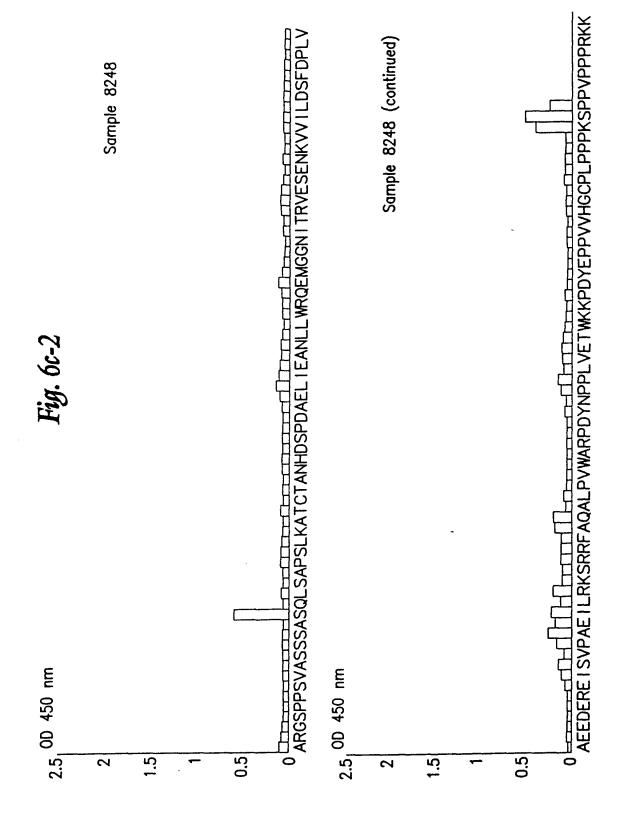


Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet 24 of 57 Atty. Dkt.: 2551-124

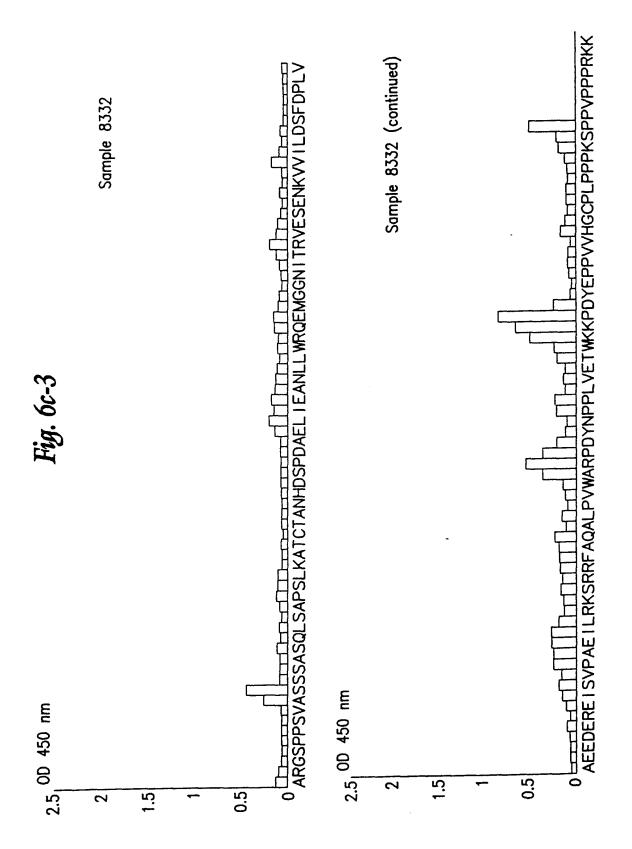
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Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet 27 of 57 Atty. Dkt.: 2551-124 Sample 8339 (continued)

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AEEDERE I SVPAE I LRKSRRF AQALPVWARPDYNPPLVET WKKPDYEPPVVHGCPLPPPKSPPVPPRKK ARGSPPSVASSSASQLSAPSLKATCTANHDSPDAEL I EANLLWRQEMGGN I TRVESENKVV I LDSFDPLV Sample 8339 Fig. 6c-4 3,00 450 nm 3 OD 450 nm 1.5 0.5 2.5 0.5 1.5 2.5

AEEDERE I SVPAE I LRKSRRFAQALPVWARPDYNPPLVETWKKPDYEPPVVHGCPLPPPKSPPVPPRKK O BRICSPPSVASSSASQL SAPSLKATCTANHDSPDAEL I EANLL WRQEMGGN I TRVESENKVV I LDSFDPLV Sample 8358 (continued) Sample 8358 Fig. 6c-5 2.5, 00 450 nm 2.5₁ 00 450 nm 0.5 1.5 5. 0.5 2 7

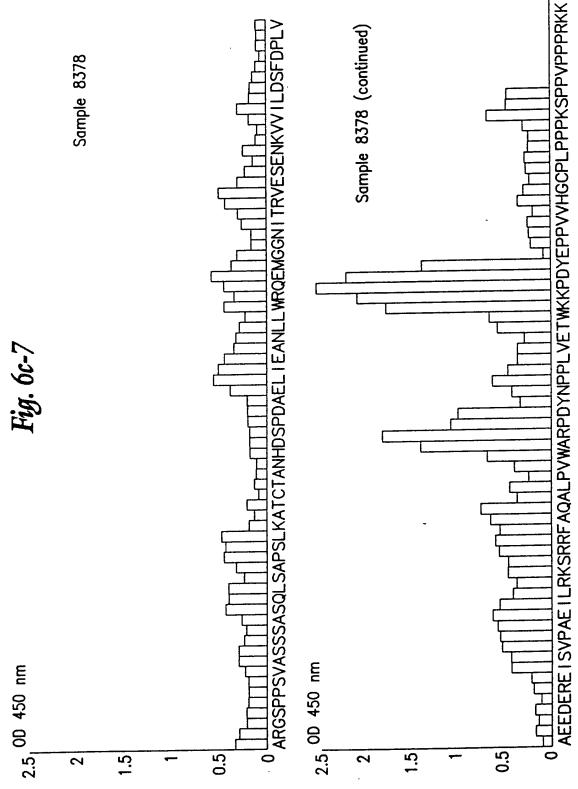
Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet 28 of 57 Atty. Dkt.: 2551-124

O ARGSPPSVASSSASQLSAPSLKATCTANHDSPDAEL I EANLL WRQEMGGN I TRVESENKVV I LDSFDPLV Sample 8377 (continued) Sample 8377 Fig. 6c-6 2.5₁ 00 450 nm 2.5, 0D 450 nm 0.5 7. 0.5 2 3.

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Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet 30 of 57 Atty. Dkt.: 2551-124 Sample 8378 (continued)

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Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet 31 of 57 Atty. Dkt.: 2551-124 Sample 8383 (continued)

AEEDERE I SVPAE I LRKSRRFAQAL PVWARPDYNPPLVETWKKPDYEPPVVHGCPLPPPKSPPVPPRKK O BRGSPPSVASSSASQLSAPSLKATCTANHDSPDAEL I EANLLWRQEMGGN I TRVESENKVV I LDSFDPLV Sample 8383 Fig. 6c-8 2.5₁ 00 450 nm 2.5, 00 450 nm 0 0.5 1.5 0.5 5.

Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet 32 of 57 Atty. Dkt.: 2551-124 AEEDERE I SVPAE I LRKSRRF AQAL PVWARPDYNPPLVETWKKPDYEPPVVHGCPLPPPKSPPVPPRKK 0 ARGSPPSVASSSASQLSAPSLKATCTANHDSPDAELIEANLLWRQEMGGNITRVESENKVVILDSFDPLV Sample 8341 (continued) Sample 8341 Fig. 6c-9 2.5₁ 00 450 nm 2.5, 00 450 nm 0.5 1.5 0.5 7. 2 2

Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet 33 of 57 Attv. Dkt.: 2551-124 AEEDERE I SVPAE I LRKSRRFAQALPVWARPDYNPPLVETWKKPDYEPPVVHGCPLPPPKSPPVPPRKK Sample 8243 (continued) Sample 8243 Fig. 6c-10 2.5₁ 00 450 nm 2.5₁ 00 450 nm H₀ 0.5 0.5 <u>v.</u> 1.5 2 2

Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet 34 of 57 Attv. Dkt.: 2551-124

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(SEQ ID NO:453)	(SEQ ID NO:454)	(SEQ ID NO:455)
Peptide I MSTIPKPQRKTKRNTNRRPQ	PQRKTKRNTNRRPQDVKFPG	RNTNRRPQDVKFPGGGQIVG
–	ΙΙ	III
Peptide	Peptide	Peptide

Peptide III	
Peptide 11	
Peptide I	

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NO:)	RNTNRRPQD	NTNRRPQDV	TNRRPQDVK	NRRPQDVKF	RRPQDVKFP	RPQDVKFPG	PQDVKFPGG	QDVKFPGGG	DVKFPGGGQ	VKFPGGGQI	KFPGGGQIV	FPGGGQIVG
(SEQ ID NO:)	(190)	(191)	(192)	(193)	(194)	(195)	(196)	(197)	(198)	(199)	(200)	(201)
SEQ ID NO:)	PORKTKRNT	QRKTKRNTN	RKTKRNTNR	KTKRNTNRR	TKRNTNRRP	KRNTNRRPQ	RNTNRRPQD	NTNRRPQDV	TNRRPQDVK	NRRPQDVKF	RRPQDVKFP	RPQDVKFPG
(SEQ I	(184)	(185)	(186)	(187)	(188)	(189)	(190)	(161)	(192)	(193)	(194)	(195)
NO:)	MSTIPKPQR	STIPKPQRK	TIPKPQRKT	IPKPQRKTK	PKPQRKTKR	KPORKTKRN	PORKTKRNT	QRKTKRNTN	RKTKRNTNR	KTKRNTNRR	TKRNTNRRP	KRNTNRRPQ
(SEQ ID NO:)	(178)	(179)	(180)	(181)	(182)	(183)	(184)	(185)	(186)	(181)	(188)	(189)

.. ..

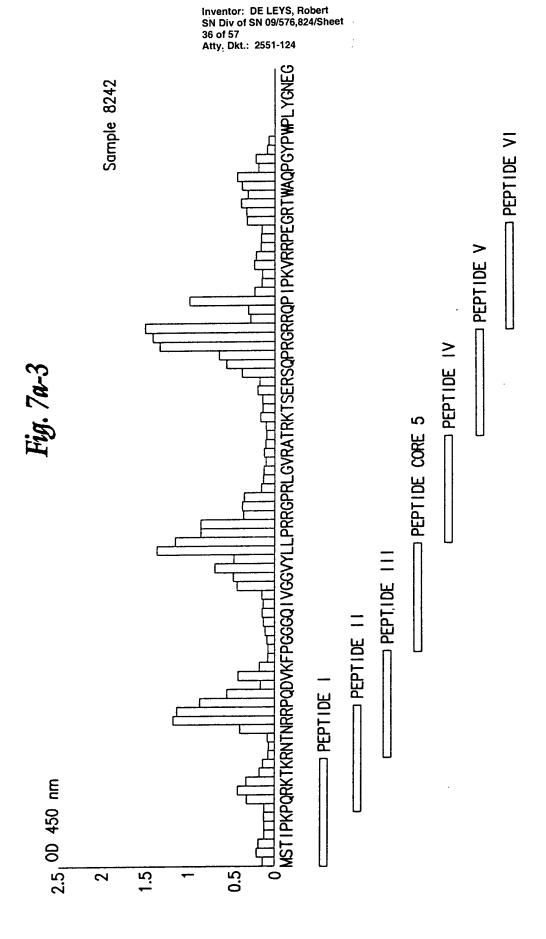
Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet 35 of 57 Atty. Dkt.: 2551-124

Fig. 7a-2

(SEQ ID NO: 459) RROPIPKVRRPEGRTWAOPG LPRRGPRLGVRATRKTSERS (seq 1D NO:457) (SEQ 1D NO:458) TRKTSERSQPRGRRQPIPKV (SEQ ID NO:456) PGGGQIVGGVYLLPRRGPRL

Core 5 Peptide : Peptide V Peptides VI Peptide V Peptide IV S Core

SEQ ID NO:)				DIPKVRRPE	2) IPKVRRPEG	3) PKVRRPEGR	4) KVRRPEGRT	5) VRRPEGRTW	6) RRPEGRTWA	7) RPEGRTWAQ	8) PEGRTWAQP	9) EGRTWAQPG
(SEQ	(238)	(239)	(240)	(241)	(242)	(243)	(544)	(245)	(346)	(24.7)	(248)	(249)
	TRKTSERSQ	RKTSERSQP	KTSERSQPR	TSERSQPRG	SERSQPRGR	ERSQPRGRR	RSQPRGRRQ	SQPRGRRQP	QPRGRRQPI	PRGRRQPIP	RGRRQPIPK	GRRQPIPKV
(SEQ ID NO:)	(226)	(227)	(228)	(229)	(230)	(231)	(232)	(233)	(234)	(235)	(236)	(237)
	LPRRGPRLG	PRRGPRLGV	RRGPRLGVR	RGPRLGVRA	GPRLGVRAT	PRLGVRATR	RLGVRATRK	LGVRATRKT	GVRATRKTS	VRATRKTSE	RATRKTSER	ATRKTSERS
(SEQ ID NO:)	(214)	(215)	(216)	(217)	(218)	(219)	(220)	(221)	(222)	(223)	(224)	(225)
(SEQ ID NO:) (S	(202) PGGGOIVGG (214)	(203) GGGQIVGGV	(204) GGOIVGGVY	(205) GOIVGGVYL	(306) OIVGGVYLL	(202) IVGGVYLLP	(208) VGGVYLLPR	(209) GGVYLLPRR	(210) GVYLLPRRG	(211) VYLLPRRGP	(212) YLLPRRGPR	(213) LLPRRGPRL



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Fig. 7b-1

4CV1 LSGKPAIIPDREVLYREFDE (seq id no:460)	HCV2 IIPDREVLYREFDEMEECSQ (SEQ ID NO:460)	4CV3 VLYREFDEMEECSQHLPYIE (seq id no:462)			HCV6 IB NO:465)	HCV1 HCV2 HCV3 HCV4 HCV5	AIIPDREVLYREFDE IIPDREVLYREFDEMEECS VLYREFDEMEECSQI DEMEECSQI
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9	O:) GMMLP	MMLAE	MLAEC	LAEQE	AEQFR	EQFKC	QFKQF	FKQK	KQKAI	QKALC	KALGI	ALGLI
HCV6	EQ ID NO.	89EQG	90QGM	91GMM	292MML	293MLA	294LAE	295AEQ	296EQF	297QFK	298FKQ	299KQK
	(S (SIEQ 2	EQG 2	EQGM 2	JGMM 2	SMML :	MILA :	1LAE	JAEQ :	AEQF:	BOFK	2FKQ :	FKQK :
HCV5	D NO:)	HLPY	LPYII	PYIE(YIEQ	IEQGI	EQGMI	QGMMI	GMML	MMLA	MLAE	LAEQ
田	(SEQ 1) H 282 S	IL 283Q	JP 284H	⁹ Y 285L	I 286P	E 287Y	3Q 288 I)G 289 E	3M 290Q	1M 291G	1L 292M	JA 293M
4	O:) EECS(ECSOF	CSOHI	SOHLE	QHLPY	HLPY	LPYII	PYIEC	YIEQ	IEQGN	EQGMN	QGMMI
HCV4	SEQ ID N 76 DEM	77 EME	78 MEE	79 EEC	80 ECS	81 CSQ	82 SQH	83 QHL	84 HLP	85 LPY	86 PYI	87 YIE
	FDEM2	DEME2	$EMEE_2$	MEEC2	$EECS_2$	$\mathbb{E}CSQ_2$	$CSQH_2$	SQHL2	$QHLP_2$	$HLPY_2$	LPYI	PYIE2
HCV3	ID NO:	LYREF	REFD	REFDE	FDEM	PDEME	DEMEE	MEEC	EE 278MEECSQHLP284 HLPYIEQGM 290QGMMLAEQF 296EQFKQKALG	TECSO	ECSOH	CSOHL
<u>-</u>	(SEQ	(R 271]	₹E 272}	3F 273F	FD 2741	JE 275	3M 276I	4E 277	EE 278	EC 279I	JS 280]	3Q 281(
2	MO:) DREVI	REVL	EVLYI	VLYRI	LYRE	YREFI	REFDI	EFDE	FDEM	DEME!	EMEE	MEEC
HCV2	SEQ ID	265I PD	266PDR	267DRE	268 REV	569 EVL	270 VLY	271 LYR	272 YRE	273 REF	274 EFC	275 FDE
	AIIP	IIPD	IPDR	PDRE	DREV	REVL	EVLY	VLYR	LYRE	YREF	REFD	EFDE
HCV1	(SEQ ID NO:) (SEQ	(259) SGKPAIIPD 265IPDREVLYR 271LYREFDEME277 EMEECSQHL 283QHLPYIEQG 289EQGMMLAEQ	(260) GKPAIIPDR 266PDREVLYRE 272YREFDEMEE 278 MEECSQHLP 284HLPYIEQGM 290QGMMLAEQF	(261) KPAIIPDRE 26 DREVLYREF 273REFDEMEEC 279 EECSOHLPY 285LPYIEOGMM 291GMMLAEOFK	(262) PAIIPDREV ₂₆₈ REVLYREFD 274EFDEMEECS ₂₈₀ ECSQHLPYI 286PYIEQGMML 292MMLAEQFKQ	(263) AIIPDREVL269 EVLYREFDE 275FDEMEECSQ281 CSQHLPYIE 287YIEQGMMLA 293MLAEQFKQK	(264) IIPDREVLY270 VLYREFDEM 276DEMEECSQH282 SQHLPYIEQ 288IEQGMMLAE 294LAEQFKQKA	(265) IPDREVLYR271 LYREFDEME 277EMEECSQHL283 QHLPYIEQG 289EQGMMLAEQ 295AEQFKQKAL	(266) PDREVLYRE ²⁷² YREFDEM	(267) DREVLYREF ²⁷³ REFDEMEEC ²⁷⁹ EECSQHLPY285 LPYIEQGMM 291GMMLAEQFK 297QFKQKALGL	(268) REVLYREFD274 EFDEMEECS 280ECSQHLPYI286 PYIEQGMML 292MMLAEQFKQ 298FKQKALGLL	(269) EVLYREFDE 275 FDEMEECSQ 281CSQHLPYIE 287 YIEQGMMLA 293MLAEQFKQK 299KQKALGLLQ
	(SEQ 11 (258)	(259)	(260)	(261)	(292)	(263)	(597)	(265)	(366)	(267)	(368)	(568)

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Fig. 7b-2

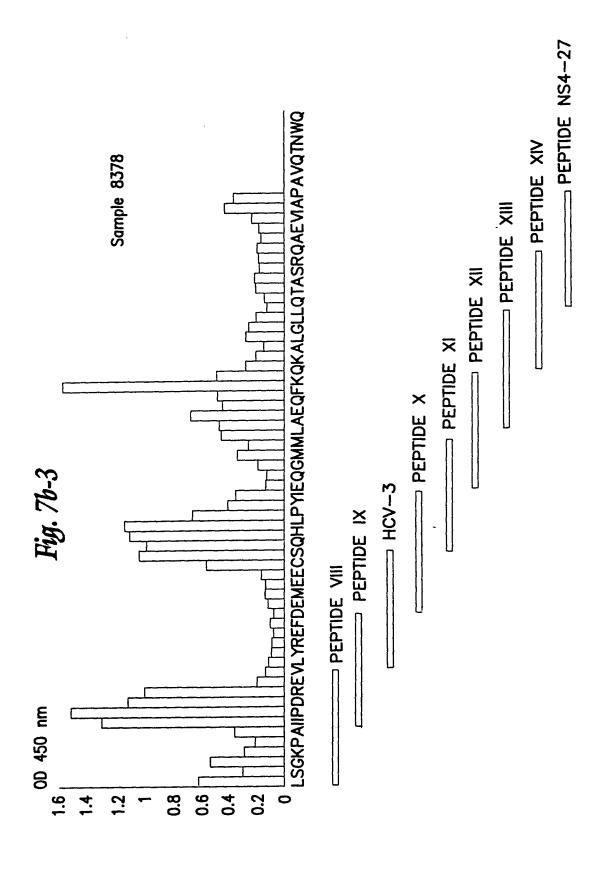
HCV7 HCV8 HCV9

LAEQFKQKALGLLQTASRQA (seq id no:466) QKALGLLQTASRQAEVIAPA (seq id no:467) LQTASRQAEVIAPAVQTNWQ (seq id no:468)

<u>HCV8</u>

ĹQTASRQAE SRQAEVIAP RQAEVIAPA QAEVIAPAV AEVIAPAVO EVIAPAVQT VIAPAVQTN TAPAVQTNW **APAVOTNWO** ASRQAEVIA QTASRQAEV TASRQAEVI OKALGLLOT (306) 1.0 (316)(317)(307)(311)(314)(315)(308)(308)(310)(312)(313)SRQAEVIAP RQAEVIAPA KALGLLQ'IA ASRÓAEVIA ALGLLQTAS LGLLQTASR LLQTASRQA LQTASRQAE **QTASRQAEV** *TASRQAEVI* GLLQTASRQ (SEQ ID NO:) (311)(294) LAEQFKQKA (300) (301)(303)(304)(305)(308)(307)(308)(309)(310)(302)GLLQTASRQ LLOTASROA (295) AEQFKQKAL LGLLQTASR (296) EQFKQKALG QFKQKALGL FKQKALGLL ALGLLQTAS KOKALGLLQ QKALGLLQT KALGLLQTA (SEQ ID NO:) (301)(304) ((303) (297) (298)(567) (300)(305)

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Fig. 7c-

VILDSFDPLVAEEDEREISV (seq id no:470) GNITRYESENKVVILDSFDP (seq id no:469) NS5-21 NS5-23 EDEREISVPAEILRKSRRFA (SEQ ID NO:471)

NS5-25 NS5-27

NS5-29

(SEQ ID NO:472) LRKSRRFAQALPVWARPDYN

VWARPDYNPPLVETWKKPDY (SEQ ID NO:473)

NS5-29 NS5-27 NS5-25 NS5-23 NS5-21

SEQ ID NO:

SEQ ID SEQ ID NO: SEQ ID NO: SEQ ID NO:

NITRYESEN 331ILDSFDPLV 343DEREISVPA 355RKSRRFAQA367 WARPDYNPP

320

ITRYESENK 332LDSFDPLVA 344 EREISVPAE 356KSRRFAQAL 368 ARPDYNPPL TRYESENKV 333DSFDPLVAE 345REISVPAEI 357SRRFAQALP 369 RPDYNPPLV 321

RYESENKVV 334SFDPLVAEE 346EISVPAEIL 358RRFAQALPV 370 PDYNPPLVE 322

ESENKVVIL336 DPLVAEEDE 348SVPAEILRK 360FAQALPVWA 372 YNPPLVETW YESENKUVI $_{335}$ FDPLVAEED $_{347}$ ISVPAEILR $_{359}$ RFAQALPVW $_{371}$ DYNPPLVET 323

SENKVVILD337 PLVAEEDER 349VPAEILRKS 361AQALPVWAR 373NPPLVETWK 325

NKVVILDSF339 VAEEDEREI 351AEILRKSRR 363ALPVWARPD 375 PLVETWKKP ENKVVILDS338 LVAEEDERE 350PAEILRKSR 362QALPVWARP 374 PPLVETWKK 326 327

KVVILDSFD340 AEEDEREIS 352EILRKSRRF 364LPVWARPDY 376LVETWKKPD

VVILDSFDP341 EEDEREISV 353ILRKSRRFA 365PVWARPDYN 377VETWKKPDY

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Fig. 7c-2

ETWKKPDYEPPVVHGCPLPP (seq 1D NO:474) (SEQ ID NO:475) VHGCPLPPPKSPPVPPRKK

NS5-31 NS5-33 NS5-33 NS5-31

VHGCPLPPK (SEQ ID NO:) ETWKKPDYE (SEQ ID NO:)

HGCPLPPKS GCPLPPKSP TWKKPDYEP

CPLPPKSPP PLPPKSPPV 392 393 WKKPDYEPP

380

381

394 KPDYEPPVV KKPDYEPPV

DYEPPVVHG 384

YEPPVVHGC 385

398 397 EPPVVHGCP PPVVHGCPL

> 386 387

PKSPPVPPP

PPPKSPPVP PPKSPPVPP

LPPPKSPPV

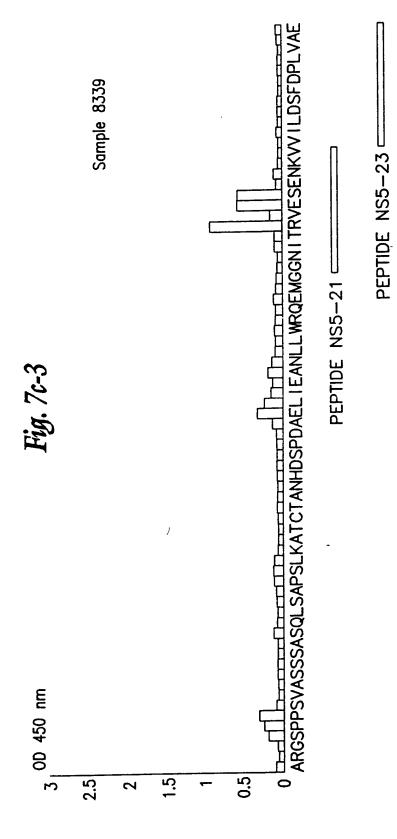
PVVHGCPLP

VVHGCPLPP

SPPVPPPRK PPVPPPRKK

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Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet 43 of 57 Attv. Dkt.: 2551-124 □ PEPTIDE XIX AEEDERE I SVPAE I LRKSRRFAQAL PVWARPDYNPPLVET WKKPDYEPPVVHGCPLPPPKSPPVPPRKK PEPTIDE XVIII Sample 8339 □ PEPTIDE XVII PEPTIDE XVI PEPTIDE XV

0.5

. . .

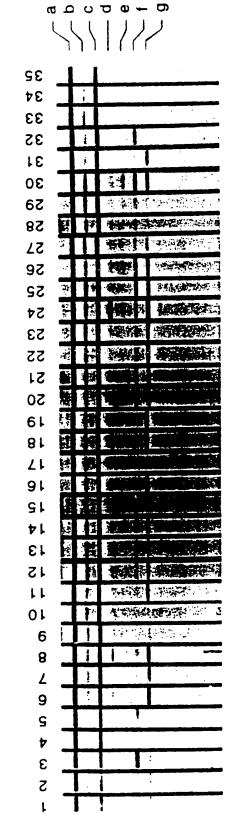
Fig. 7c-4

3,00 450 nm

2.5

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Peptide XXg-1, unbiotinylated Medium intensity control a: High intensity control b: Low intensity control c: Medium intensity controd d: Peptide XXg-1, unbiotin

Peptide XXg-2, unbiotinylated

e: Peptide XXg-2, unbiotinylated f: Biotinylated peptide XXg-1: streptavidin complex g: Biotinylated peptide XXg-2: streptavidin complex

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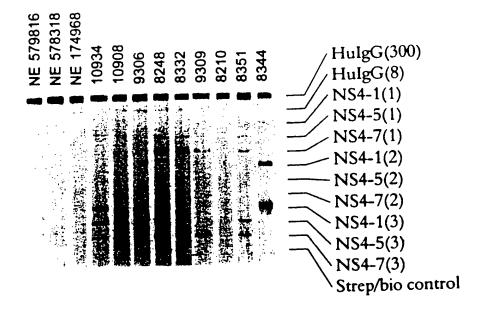
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1.5

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Fig. 10



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Peptide	Sequence
NS4-a	GALVAFKIMSGEVPSTEDLV (SEQ ID NO:445)
NS4-b	VPSTEDLVNLLPAILSPGAL (SEQ ID NO:446)
NS4-c	AILSPGALVVGVVCAAILRR (SEQ ID NO:447)
NS4-d	(SEQ ID NO:448) VCAAILRRHVGPGEGAVQWM
NS4-e	(SEQ ID NO:449) GEGAVQWMNRLIAFASRGNH

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-	rig.	
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(SEQ ID NO:)

	ı U	REVLYRGGKKPDYEPPVGGRRPQDVKFP NS4 Spitope 1 Brown Brogger Front Arrest Core	ARPQDVKFP Core epitope 2
	ı u	NS5 epitope 5	Core epitope 2
Epi-33B3A Bio- G G			
			PDYNPPGGQFKQKALGLGSGVYLLPRRG
(451)	NS5 epitope 3	NS4 epitope 3B	Core epitope 3A
Epi-4B2A6 Bio- G G - R G R		ROPIPKGGSQHLPYIEQSGPVVHGCPLP	PVVHGCPLP
(452)	Core epitope 4B	NS4 epitope 2A	NS5 epitope 6

-	4				•																
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SUBSTITUTIONS AT EACH POSITION	11 12 13 14 15 16 17 18 19 20	O	O									//									
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			Partial sequence PEPTIDE XXg	2	4	16	64	192	768	4608	9216	46080	138240	414720	1658880	6635520	59719680	238878720	1911029760	1.1466179 E 10	No. of Variants

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Fig. 14c

						<i>]]</i>		//									
9	48	192	1728	6912	27648	82944	248832	1244160	2488320	14929920	59719680	179159040	716636160	2866544640	5733089280	1.1466179 E 10	No. of Variants

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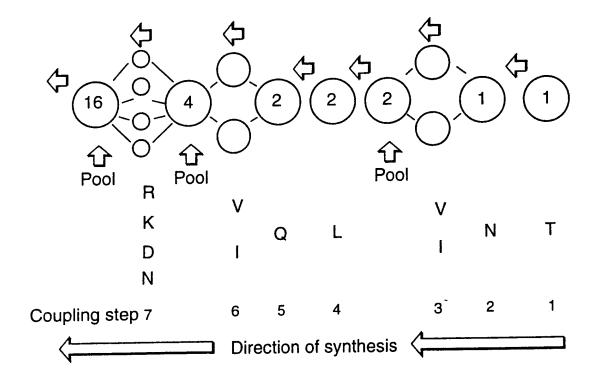
No. of Variants 27648 13824 5184 6480 1440 2160 2160 720 720 720 720 96 96 96 96 32 16 16 16 16

Fig. 14d

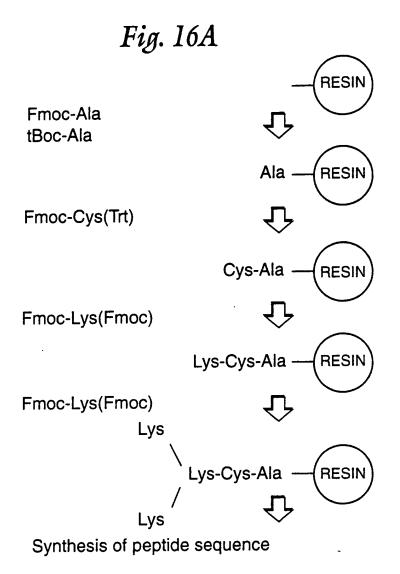
Inventor: DE LEYS, Robert SN Div of SN 09/576,824/Sheet 53 of 57 Atty Dist : 2551-124

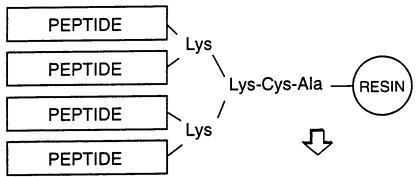
Fig. 15

Mixotope Synthesis Strategy



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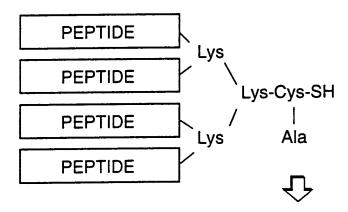




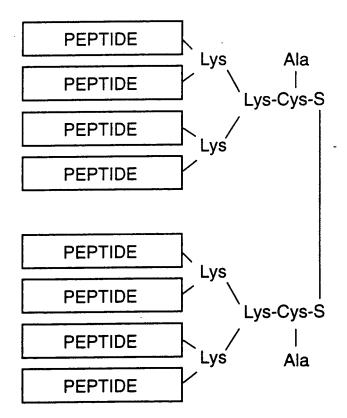
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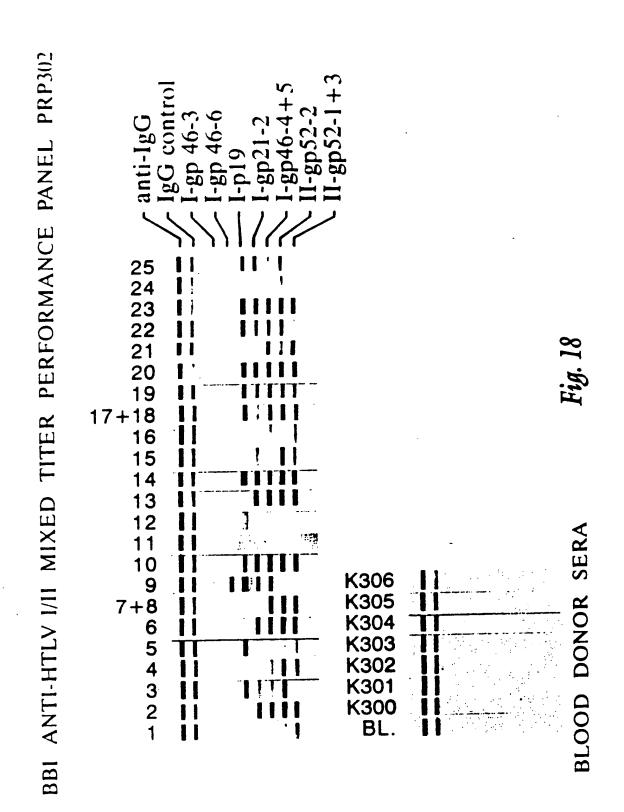
Fig. 16B

Cleavage and side-chain deprotection



Oxidation and dimerization





RABBIT No	18 13 325	PRE- IMUNE 01.9	2 328		ING .92 327	ANX	XXc - 1 XXc - 2 XXe - 1 XXe - 2 XXf - 1 XXf - 2 XXg - 1 XXg - 2
RA RA	ABBI II	T 327 PRE- MMUNE .01.9	7, 328	FIR BLEEL 07.04	ST DING		Fig. 17B
RABBIT No		327 326		326 325	327	328	-
							$ \begin{array}{r} XXb - 1 \\ XXb - 2 \\ XXd - 1 \\ XXd - 2 \\ XXa - 1 \\ XXa - 2 \\ XXh - 1 \\ XXh - 2 \end{array} $

RABBIT 325, 326: XXb-2-MAP RABBIT 327, 328: XXg-2-MAP